DOCUMENT RESUME

ED 093 023 CS 500 771

AUTHOR Pacanowsky, Michael; Farace, Richard V.
TITLE An Instructional Simulation for Organizational Communication.
PUB DATE Apr 74
NOTE 16p.; Paper presented at the Annual Meeting of the International Communication Association (19th, New Orleans, Louisiana, April 17-20, 1974)

EDRS PRICE MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS Behavior Patterns; Business Administration; *Communication (Thought Transfer); Communication Skills; Higher Education; *Management Games; *Organization; *Simulation; *Teaching Techniques

ABSTRACT

Ineffective communication in an organization is costly. This paper examines one of the many approaches to solving this problem--increasing employee awareness of communication by increasing employee communication skills and sophistication. Simulation games are an effective means of improving employee awareness. The simulation provides a common experience through which participants can learn general communication principles. It also gives the participants a perspective of the overall communication processes in the organization and provides a framework on which organizational communication skills can be built. Finally the simulation can be used to permit participants to experiment with different organizational structures and communication strategies to observe the effects on communication behavior. (RB)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED 093023

AN INSTRUCTIONAL SIMULATION FOR ORGANIZATIONAL COMMUNICATION

Michael Pacanowsky

Richard V. Farace

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
Michael Pacanowsky
Richard V. Farace
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

Department of Communication
Michigan State University
East Lansing, Michigan

March, 1974

(Paper presented to the 1974 International Communication Association - Organizational Division meetings)

CS 500 771

"Why can't anybody ever get anything straight around here?" This question usually announces the fact that, somewhere in the organization, communication has fallen apart. Delivery got the cities mixed up and shipped the rush order to the wrong place. The workers in final assembly, not knowing what "chromium gleam" was, put the wrong colored widgets on the front end. Sales didn't have the latest pricing information and what could have been "The Big Order" slipped away.

Let's face it. In any organization, communication breakdowns are costly. When communication begins to fall apart, organizational goals of efficiency, productivity, and profit are sure to decline. Communication breakdowns, by frustrating those individuals who take their job seriously, can also lead to a general decrease in morale.

So how do you keep communication breakdowns from hurting the organization and the people in it? How do you increase employee communication skills? How do you get people to come to understand the processes of communication that occur in an organization? And finally, how do you systematically develop communication strategies that can improve the flow of communication in an organization?

To answer all these questions adequately is certainly a monumental task. And there are, of course, many different approaches that can contribute to a final solution. In this paper, we will describe one approach to the problem--the use of instructional simulations. Then, we will outline a simulation that may be of particular use to communication specialists in organizations.

Instructional Simulations

An often held criticism of instructional simulations is that, because the real life situation is simplified, the participants do not gain any "real life" knowledge. We disagree. When people discuss the communication problems in their organizations, it is often precisely the very "realness" of the situation, and their familiarity with it, that keeps them from understanding the general communication principles involved. By abstracting and simplifying, we can clarify the real world situation. It is precisely because the situation is reduced to its essence that people can learn from simulations.

Considering the nature of the problems we are talking about, it is our belief that an effective instructional simulation for organizational communication must be able to do a number of things. Clearly, it must help develop the participants' communication skills. But it must do more than that. It must also help increase the participants' understanding of the communication processes at work in an organization. Finally, it must permit participants to explore the effects of different communication strategies on the organization.

Unfortunately in organizational communication, most instructional simulations do not meet all these criteria. Those developed for sensitivity training programs usually attempt only to increase interpersonal communication skills. This is certainly important. But these simulations do little to make the participants aware of the communication processes in an organization beyond the dyadic level. A similar problem occurs with most group communication exercises. Although often providing an orientation to different organizational structures, these exercises still fail to provide participants with an overall view of the communication processes in an organization.

Clearly, organizations are more than dyads or groups in isolation. To understand the communication processes in an organization, participants must understand how these dyads and groups are integrated into the overall organization structure. They have to be able to see how communication is used to link dyads together and coordinate their activities. They also need to see how information gets from one group to another, and what happens to that information as it flows throughout the organization.

To enable participants to understand the communication processes throughout the organization, we developed a simulation wherein an entire organization is created. Through this simulation of the overall organizational structure, participants can activate and monitor the overall organizational communication processes.

In developing this simulation, we had four main objectives in mind:

1) To provide a common experience through which participants could learn general communication principles which could later be applied to their own "real world" situation;

2) To give the participants a perspective of the overall communication processes in the organization;

3) To provide a framework from which other exercises, like those which develop dyadic or group communication skills, could be put into an organizational context; and

4) To develop a simulation flexible enough that participants could experiment with different communication strategies and different organizational structures and see the effects these will have on the communication processes.

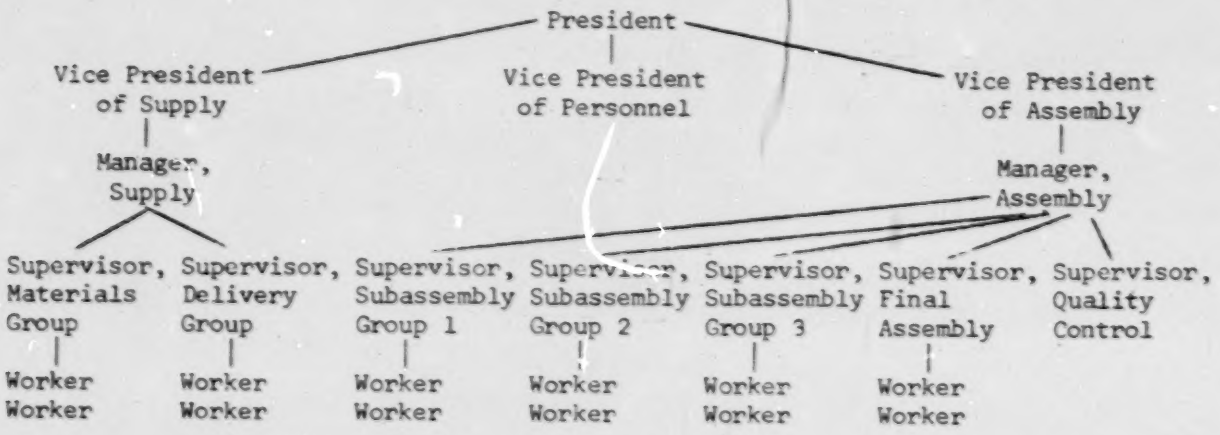
For the remainder of this paper, we will describe the simulation, present a discussion of some of the principles and perspectives of organizational communication that the participants will be exposed to, and finally, suggest some uses practitioners may have for the simulation.

Hi-Fli Fireworks Company

In the simulation, a company known as the Hi-Fli Fireworks Company is set up to produce fireworks models as quickly as possible. The company resembles many traditional production-oriented organizations. There are two main departments--a Supply Department, which handles the parts and takes care of delivery both in and out of the plant; and an Assembly Department, where three separate subassembly components are built and then assembled into the final fireworks model.

Participants assume the roles of the employees at different hierarchical levels in the organization. The top executives are responsible for all administrative decisions of the company. The departmental managers relay information and decisions from top management down to the work group levels. In the Supply Department, the Materials Group keeps an inventory of parts and the Delivery Group distributes the parts within the plant. In the Assembly Department, each subassembly group is given the blueprints to build a different subassembly component. Final Assembly puts the components together and Quality Control checks the finished product for flaws.

HI-FLI FIREWORKS COMPANY - ORGANIZATION CHART



Each player is given a different role with a different set of rules to follow. The particular rules for each player are spelled out on the player's Job Description Sheet. The Job Description Sheet gives each player the background information he or she will need to play the role, along with specific information about the responsibilities of the job. What is more important from the stand point of communication, however, is the fact that the communication channels for each individual are structured in advance by the communication rules which are clearly laid out on each Job Description Sheet. (See the attached sample Job Description Sheet.)

Any player can send a written message to any other player. But, in most cases, the player is allowed to talk to only his immediate supervisor and his immediate subordinates. For example, the Supervisor of Subassembly Group 1 can carry on a conversation with his supervisor--the Manager of the Assembly Department, with his subordinates, and with no one else. Thus, the communication channels open to most participants are those which follow the formal organizational hierarchy.*

It is within this framework of the formal organization and its formal communication channels that the simulation unfolds. Each player contributes his or her skills to the task of efficiently producing fireworks models. Each player is at the same time also trying different ways of gathering and disseminating information. It is through the communication strategies that the players employ, and the results of these strategies, that the principles of organizational communication can be brought out.

---

*Often in the discussion after the game, participants will point to the restricted communication as the source of all problems. The facilitator needs only to point out that in any organization, due to physical boundaries or the sheer impossibility of it, not everybody talks to everybody else. Communication is limited. Furthermore, the point of the simulation is, given restricted communication channels, what are the best strategies for effective communication?

General Communication Principles Related to the Simulation

After the simulation is over, the participants should be encouraged to discuss their experiences and try to come to some understanding of general communication principles in organizations. Typically, participants begin such discussions by focusing in on personal mishaps or miscues that were examples of communication breakdowns. "The Materials Group never got our requests for parts right. We were always getting things we didn't need and not getting the things we needed." But what appears to be the "fault" of one work group soon turns out to be part of a larger problem. "Well, I was in the Materials Group and the reason we didn't send out the right parts was because we ran out of them! One subassembly group ordered all the green fins we had."

After a few minutes, participants will have brought out so many specific examples that the facilitator will easily be able to begin developing some general communication principles applicable to organizations and specific strategies that participants can use to become more effective communicators. The following discussion includes some, but certainly not all, of the points that can be made.

1) People in different parts of an organization perceive things differently.

The simulation usually involves about 25 people, all in the same room, all playing for about the same half hour to an hour. Yet, if you ask a subassembly worker and the Vice President of Supply what the game was all about, you will get two entirely different versions of what happened. Why? Because people's perceptions are influenced by the different kinds of information they receive. The worker is likely to talk about the difficulties in getting parts or the steps he went through in constructing the subassembly component. His information is very specific, but he lacks the general information that would give him

an overview of what went on. The Vice President of Supply, on the other hand, will talk about the problem of coordinating the distribution of parts. He will probably know very little about what actually happens to the parts once they get to a subassembly work group, only that they come out as one component of the final unit. He has a good deal of general information, but not that much specific information.

A second reason why people perceive things differently in the organization is that people have different goals. For example, one goal that the Supervisor of Quality Control may have is to make sure that there are absolutely no flaws in any model that is built. But the goal of a subassembly group may be to build components as quickly as possible, regardless of minor flaws that may occur. Both of these groups see their goal as being consistent with the idea of "efficient" production. But the perceptions of these two work units of what needs to be done are clearly at odds with one another.

Through examples such as these, the participant can see that people in an organization will perceive things differently because of different information that they possess or because of different goals they are striving to achieve. Therefore, to be an effective communicator, the participant must realize that others may not see his messages the same way he does. He must adopt a receiver-orientation. He must ascertain how his message is likely to be perceived, and therefore, figure out what will be the best way to construct his message so that his point will be understood.

2) People in different parts of an organization are exposed to different amounts of information load.

In any organization, some people are going to get information either faster or slower than they can comfortably handle it. In the Hi-Fli Fireworks Company, the people in the Materials Group are almost always overloaded. Requests for

parts come in faster than they can handle them. The result is often error. The wrong parts do go out to the wrong subassembly groups.

On the other hand, subassembly workers often find themselves underloaded. Sometimes there is nothing for them to do until a parts shipment comes in. This underload condition often causes boredom or apathy.

Clearly, these responses to overload or underload conditions are not peculiar to the Hi-Fli Fireworks Company. People in all organizations everywhere respond similarly. Also similar is the way in which participants often try to deal with the imbalance in load.

The Materials Group, for example, will usually try to sift through all the orders before them--one at a time. They will try to fill the order on top first, and then work their way down the stack. This strategy for coping with overload, queueing, is not always the best. Sometimes one subassembly group will send in a flood of requests for parts. If all these requests are filled, that one subassembly group will be cranking out the components, but no one else will. A better plan, then, would be to fill one order for each different subassembly group in turn. That way, each subassembly group would have the parts to build one component at a time, and the components could be assembled into the final unit, and the parts would have been distributed most efficiently.

Likewise, the participants can be shown that there are effective and ineffective ways of coping with information underload. The ineffective way (which unfortunately is not uncommon), is for people to start creating their own inputs to process. (Unneeded paperwork is a prime example of this.) Instead, the underloaded individual should be encouraged to think of innovations that could improve his task performance.

The participant can recognize that certain behaviors (making errors, apathy) are not merely the result of "bad" attitudes, but may result from an imbalance in the person's ability to process information and the amount of information the person gets to process. The participant, therefore, can learn that his effectiveness in the organization can be improved by recognizing conditions of information overload or underload and then by using appropriate strategies to deal with them.

3) As messages travel throughout the organization, their meanings are often likely to change.

Invariably in the simulation, many messages will end up being distorted. As the participants think back about what caused the distortion, rather than blaming it on one individual's lack of communication skills, they are likely to see distortion as taking place within a larger framework of communication processes. For example, participants can see in the game how messages are interpreted differently and have different meanings for words. Or, participants become aware of how overload can cause inattention to some messages and not assign the same importance to the message as the person who sent it.

It is within the context of these general communication principles that strategies to reduce distortion take on meaning. We have already discussed receiver-orientation and coping mechanisms for different information load conditions. Participants can also be made to see the value of asking for feedback to see if a message is understood as intended. Supervisors should be impressed with the need not only to give understandable orders, but to ask for feedback to make sure the order is understood.

* * * * *

These are just a few of the general communication principles the simulation was designed to illustrate. The total number of principles that can be drawn

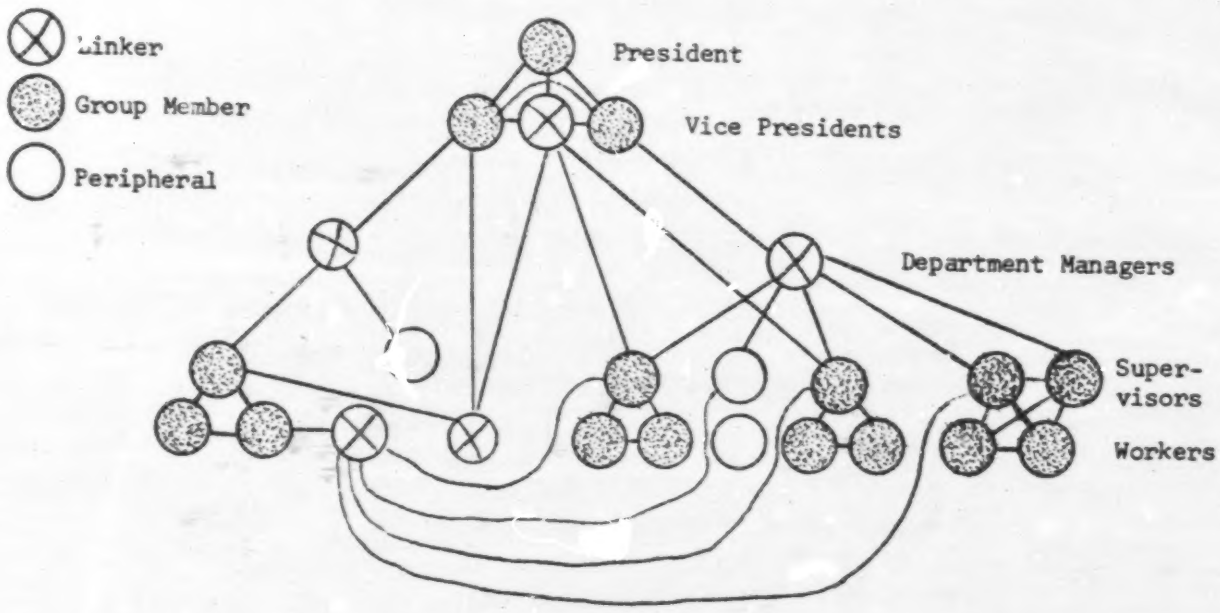
out of the simulation experience is no fewer than those that can be found in any organization. What is required is a familiarity with communication principles and an imagination that can see the application of those principles to the situations that occur in the "real world."

A Network Analysis Perspective of the Hi-Fli Fireworks Company

Another objective of the simulation is to give the participants a perspective of the communication processes that occur in an organization. We want the participant to see how the components in the communication system are linked to one another into a communication network, and how communication flows through that network. We have found that a satisfactory way of describing these processes is with the concepts of network analysis. Thus, the simulation was specifically designed to illustrate many of the concepts of network analysis. Through such a view of the Hi-Fli Fireworks Company, the participants can begin to understand the concepts of network analysis and apply these notions to the communication processes of their own organization.

At the beginning of the game, the communication rules make it likely that certain people will have certain network roles. That is, because of the communication channels established in the beginning of the game, it is likely that some people will be peripherals--very uninvolved in the communication network, and some will be group members, and some will be linkers--who join various groups together. Interestingly enough, when there are two workers in a work unit, they are likely to be part of a group, but when there is only one worker, he is likely to be a peripheral.

A POSSIBLE ORAL COMMUNICATION NETWORK OF THE HI-FLI ORGANIZATION



It is not always the case, though, that the Supervisor of Quality Control, for example, will be a group member. Often, he may be a linker with contacts in all of the subassembly groups. On the other hand, sometimes workers in the subassembly groups, instead of being group members, drop out of the network due to underload and become peripherals. This clearly points out the extent to which different conditions can affect network roles.

So far, however, our network analysis perspective has been merely descriptive. How can the participants apply these concepts to better understand the communication processes in their organization? Again, there seem to be a number of general principles that can be brought out through the use of the simulation.

General Principles of Network Analysis Related to the Simulation

1) An individual's communication role is related to his satisfaction with the communication structure of the organization.

In the Hi-Fli game, the extent of worker satisfaction seems to have less to do with the formal role in the game (President, Manager, Worker) than it does with the network role. That is, the linkers, whether they are the Vice President of Personnel or delivery workers, show greater satisfaction for their jobs than people with minimal involvement in the network. This clearly seems to indicate that participation in the communication network is a source of satisfaction. Participants may then begin to see the importance of making an effort to involve all people in the communication network of their organization.

2) There is a difference between the formal and informal communication networks in an organization.

In the Hi-Fli game, the communication rules channel most of the communication through the formal network. However, soon after the game has begun, participants will find reasons for talking to people they are not "supposed" to. That is, they quickly establish an informal communication network. When questioned why this happened, there are usually two responses: "I had to talk to so-and-so because that was the only way I could get the job done," or, "I wasn't doing very much so I just felt like talking to the person next to me."

These responses are examples of two different reasons why there may be deviations from the formal network in an organization. In the first case, the individual is saying that the formal communication network is restricting his ability to get the job done. In the second case, the individual's goal may not be in keeping with organizational goals. By this we are not saying that all deviations from the formal network are bad. We are suggesting that organizations take a careful look at such deviations to see if either the communication

channels are not structured efficiently or if there is a wide difference between what the organization expects from its workers and what it is getting. In either case, the nature of the deviation is important if the organization is to take appropriate steps to correct the situation.

Through the application of network analysis concepts like these, the participant can understand how communication links the parts of the structure together and how communication flows throughout this structure. Then, by applying these concepts, the participant can see the communication processes that operate in his own organization.

Uses of the Simulation

We can suggest two general uses of the simulation that may prove to be most useful to the practitioner. One that we have hinted at already is as part of a communication training program. Ideally, the simulation should start such a training program, be followed by a discussion of general communication principles as described above and a set of communication skills exercises that build on those principles, and concluded by another run of the simulation so that the participants can measure the increase in communication awareness and effectiveness that they have acquired. Through the discussion of the Hi-Fli game, the participant should get a better grasp of the larger picture of communication in an organization and then be encouraged to begin applying these communication principles to their own organizations.

Secondly, and perhaps more importantly, we suggest that practitioners use the simulation as a communication laboratory where they can see the effects of either different communication strategies or different organizational structures on communication behavior. For example, let's assume that a company is considering formalizing a "suggestion box" routine to get new ideas from employees. By

incorporating such a feature into the game, the communication specialist can get some measure of how the employees in his organization will respond to such an innovation. He can see how to best present the idea, what further clarification the employees may need to feel comfortable with it, and what kind of response he can expect. Clearly, it is far easier (and cheaper) for the communication specialist to try out various aspects of such an approach in a "laboratory" than it is in the organization as a whole. After trying several approaches to the innovation, the communication specialist can get a general feel for the relative effectiveness of each strategy for his own organization.

Summary

Ineffective communication in an organization is costly, with various approaches offered as solutions to this problem. In this paper, we have discussed one approach--increasing employee awareness of communication by increasing his communication skills and sophistication. The Hi-Fli Fireworks Company Game was specifically designed to help achieve these ends.

The simulation provides a common experience through which participants can learn general communication principles. It also gives the participants a perspective of the overall communication processes in the organization and provides a framework upon which organizational communication skills can be built. Finally, the simulation can be used to permit participants to experiment with different organizational structures and communication strategies to see the effects on communication behavior.

Clearly, using the simulation will not cause "everybody to always get everything straight." But it can increase the employee's appreciation for the processes of communication in an organization. And certainly, that is a step in the right direction.

JOB DESCRIPTION SHEET

JOB TITLE: Supervisor, Subassembly Group 1

JOB RESPONSIBILITY: It's your job to supervise and direct the activities of Subassembly Group 1. Your workers manufacture Subassembly Component 1, which is called the "Base." You will give them the instructions and guidance they will need to manufacture the "Base." When the component is built, you will fill out a request for a delivery worker who will take the component to Final Assembly. Then, you will fill out a Parts Request Form, ordering the parts to build another component. You will pass the Parts Request Form on to the Manager, Assembly Department who has to sign it. Finally, it's your responsibility to handle any questions or problems your subordinates may have, and to carry out the orders given by your superior, the Manager, Assembly Department.

SUMMARY:

1. Instruct your workers in how to build the "Base." (See Diagram - Subassembly Component 1, "Base," Model A.)
2. Request a delivery worker to take the component to Final Assembly. (See Sample - Request for Delivery.)
3. Request more parts. (See Sample - Parts Request Form.)
4. Keep repeating the above steps.
5. Handle the questions and problems of your subordinates.
6. Carry out the orders given by the Manager, Assembly Department.

IF YOU HAVE A QUESTION OR PROBLEM:

1. See the Manager, Assembly Department.
2. If you feel you aren't getting the help you need from him, write a letter to the Vice President of Personnel.

IF YOU HAVE AN IDEA FOR A NEW WAY TO DO THINGS:

1. Write a letter to the Vice President of Personnel outlining your idea and explaining why you think it should be adopted.

COMMUNICATION RULES:

1. You may continue a conversation started by someone else.
2. You may start a conversation with:
   a. Your subordinates
   b. The Manager, Assembly Department.
3. You may not start a conversation with anyone else.